

Abhishek Thakkar

Research Student

Department of English,

Gujarat University

Ahmedabad, Gujarat, India.

abhishekvthakkar1010@gmail.com

Dr. Dushyant Nimavat

Department of English

Gujarat University

Ahmedabad, Gujarat, India.

The Origin of Species: The most significant work of Victorian literature

Abstract: This paper aims to throw light on the scientific principles, fundamental concepts, contemporary relevance as well as influence of Darwinian model of evolution on Victorian England which transmuted the understanding of humanity regarding its origins and the working of the natural world. Darwin observes in his magnum opus *The Origin of Species* that it is Nature that selects the ones most fit to survive by bequeathing them advantageous variations and thereby deciding the survival of the fittest in the struggle for existence. In the past, it was natural theology which gave answers to the biggest questions of mankind but Darwinian model provided more plausible answers by providing evidence for its arguments against the traditional notion that each species had been independently created. Darwinian model also had repercussions worldwide through the movement of Social Darwinism and The New Atheism. This research compares and contrasts evolution with creationism and

explicates the effects of Darwinian model of evolution on the bourgeois, affluent and the proletariat population of the postmodern world and Victorian Age.

Keywords: The struggle for existence, Social Darwinism, The New Atheism, Victorian Age.

The Origin of Species penned down by the ingenious scientist Charles Darwin is an immortal work of scientific literature which has completely transformed our understanding of human origins and the descent of man. This book presents the scientific theory that populations evolve over several generations through a process where nature selects the ones fit to survive. It embodies natural philosophy and gives it a sound basis through the methodology of inductive reasoning which is constructed and grounded on empirical evidence. On the Origin of Species by Means of Natural Selection, or the Preservation of Favored Races in the Struggle for Life shook the roots of natural theology of which science was an infinitesimal slice or chunk. This scientific treatise which is taught in the science textbooks almost worldwide ushered in a wave of rational thinking, critical inquiry and awakened the thunderous spirit of questioning where even theology couldn't be unshackled or unfettered. This groundbreaking work made the system of education anthropocentric rather than theocentric and bestowed masses with the power to question everything in the creation that is considered sacrosanct and revered.

Earlier, natural theology subdued the intellect and governed the minds of previous generations when science was merely a toddler. Church determined the beliefs of people and questioning the sanctified beliefs of theology was not considered nice. Challenging the so called fundamentals of Christian doctrines was considered a heresy and blasphemy. In one of the interviews of author Dan Brown, he states that when he felt evolution was supported by more evidence than creationism, he was feeling befuddled and flummoxed. He asked one Catholic priest to resolve his doubts but the priest concisely said, "Nice boys don't ask such questions". This contemporary anecdote best summarizes the gist of the plight of the

suppressed bourgeois and proletariat since the time Church held power over a major population of the world.

Myths defined and delineated the structures of thinking and fascinating stories about supernatural creatures ruled the dormant intellects of this enormous world. Deductive reasoning was the methodology used in transmitting knowledge where authority directed the provision of information. But Darwin's text *On the Origin of Species* not only splintered and deconstructed the narrative structures but also provided an irrefutable set of scientific principles adhering to the spirit of post structuralism and secular humanism.

This theory's central idea is the notion of variation. It claims that the diverse traits and adaptations that distinguish species from each other also elucidate their evolution over time and their slow divergence. Darwin explicitly stated in his book that heredity is the instrument that propagates and disseminates variations. He also gives copious set of examples to prove his theory and to silence his critics. He talks about the beak that allows the woodpecker to gather insects, the wings that allow the bat to soar, and the paddles that let the porpoise swim and plunge into a water body. He hypothesizes that the insignificant variations we see within a solitary species are related to the more distinct variations we see across different species.

The insignificant variation which might be thought of as mundane or ordinary actually represents the details of ancestry and how variations might be inherited in offspring after certain generations. Although it may seem inconceivable to many people but certain traits do repeat and traits are definitely passed from parents to offspring. Darwin deduced that variations couldn't occur without natural selection and descent without modification and he provides powerful evidence to back his views.

Darwinian model of thinking somewhere mocks God through the power of inductive reasoning by showing that humans aren't the center of the universe and each species is not independently created as proposed by natural theology. Cosmologist Lawrence Krauss and

evolutionary biologist Richard Dawkins laugh hysterically at the fundamental belief of Christianity that we are the sons and daughters of Adam and Eve because it lacks credible evidence. Darwin didn't say that he knew about the origin of life on earth and he does leave room for God or a Creator but he did demonstrate one thing that humans and apes descend from a common ancestor or the same parent species and that evolution is a gradual process. He has revealed that color patterns appearing in varieties of horses often impersonates or imitates the color patterns of zebras and horses, which illustrates that all may have descended from the same parent species.

With the advances in genetics and paleontology, Darwinian Theory of evolution through natural selection has almost acquired a common accord and acquiescence amongst molecular biologists and evolutionary biologists. Although many scientists such as Michael J Behe and Professor John Lennox have tried to dismantle and topple Darwinian ideas through sound arguments and robust line of reasoning, Darwinian model of origin of species still remains a stronger model for explanation of natural world than the creationist model which relies on a supernatural agency which cannot be perceived by scientific instruments and is largely based upon subjectivity and metaphysics.

Origin of Species by Charles Darwin holds nature as the supreme authority. Nature is the source of wonder and praise for Darwin. He does rejoice in the poetry of reality of nature. Darwin tries to demystify nature through experimentation, observation and hypothesizing. He constructs theories based on facts and arms himself with concrete evidence. Darwin disagrees with the Christian view of God as all merciful Father and debates extremely well in his book with the natural theologians and the naturalists who believe that each species was independently created. He overtly states his conviction that all organic and conscious beings are included in his scheme of descent with modification thereby subtly hinting that humans are not *sui generis* in the creation or the natural world. He associates the hand and arm structure of

the humans with the wings of the bat and the paddle arms of the porpoise. This linking reveals that humans are the part of the same evolutionary scheme that created bats and porpoises.

This grand work on the theory of evolution is based on certain principles such as illusion of design, seeming perfection, natural selection, random nature of variation, gradual movement towards a more perfected state and the notion that humans aren't a product of divine will but develop through nature's will. Darwin strongly believed that Nature selects the ones most fit to survive and the advantageous variations in a species allow it to adapt and survive while the species lacking it die out and become extinct. While Natural theologians saw the creation and perfect adaptability as God's miracle and orchestration, Darwin beheld nature as deserving of adulation and veneration.

The book questions theologians and gives the general masses the power to think rationally and the strength to dissent. Darwin's questioning spirit and his inductive reasoning provides plausible explanations regarding the subsets in a species and subsets found elsewhere. He also describes the process of unconscious selection which is responsible for one species' survival while the rest was being wiped out by nature.

The Christian view doesn't recognize nature as a force in its Holy trinity but Darwin envisaged Nature as the designer through randomness and perpetuity of meritorious traits.

The author describes his bewilderment regarding the unknown reason about certain unusable organs or trivial traits being passed on to the next generation. Author speculates that such organs might have been useful in some previous generation but now it might not be utilitarian. It can be asked to a natural theologian that, "Why a perfect Creator would create paltry organs that become unusable when passed on to the later generations of the offspring? Doesn't it reveal imperfection in the divine design"?

Darwin critiques creationism in his treatise by proposing that the gamut of disparities within species and between the larger family of related species and the smaller species

establishes that the theory of divine creation is flawed. He also confirms through his findings that distinctions within a species stem as a result of unique circumstances, proving that nature and heredity are indispensable factors in the growth of the species. Since the time Darwinian Theory of evolution has been published, evolutionists and Creationists have been at war. It is due to the Darwin's scientific theory of evolution that we are no more taught that we are descendants of Adam and Eve and a jealous God created us. The Enlightenment movement has brought secularism and humanism into focus where the study of nature and the key scientific principles – experimentation and observation play a pivotal role in shaping our understanding of the blue planet and our vast cosmos.

Christians believe that earth is merely 6,000 years old while there are mountains on earth which are lakhs of years old. Christians used to believe in the world that was geocentric but science has proved that the solar system is heliocentric. Followers of Bible used to believe that earth was flat but due to Galileo's efforts it was proven that earth was oval in shape. Copernicus disproved the traditional orthodox belief of theologians regarding the geocentric nature of the world.

“In Science, there is no authority. There are only experts. In Science, even a low grad student can challenge a scientist and question him. That is the best thing about science.” – Cosmologist Lawrence Krauss

Darwin in his Magnus Opus on the Origin of Species through Natural Selection allows his readers to question him. He himself asks certain questions when he feels perplexed regarding the complexity of the eye or how variations occurred in the original parent species. He discusses debates and deconstructs natural theology but still leaves room for God. He expresses wonder and marvels at the remarkable workmanship of Nature. According to him, artificial breeding can never match nature's miracles and also nature's destruction. It almost seems as if Nature is a person when Darwin describes Nature as a higher force.

Even the loopholes such as the lack of evidence of the existence of intermediate species or the intermediate links and the unknown reason for variation are refuted brilliantly by Darwin. He states that the geological record is deficient and inadequate due to the changes in land over time. The constantly changing physical structure of the earth has led to the purgation of the remains of all the extinct species that could have served as tools to rebuild the tree of history of species progression. Darwin also enunciates that some fossil residues may have withered in the ocean, as most sediment deposits are not thick enough to tolerate the damage triggered by waves. His reasons for defense being incisive and logical bear the heat of the opponents of his theory successfully because it cannot be spurned that just because something hasn't been found yet, it never existed in the past. Such a claim would be preposterous and fallacious considering that scientists lack the knowledge of infinite species across the planet because of the unfathomable age of the earth.

Darwinian Theory of evolution has been criticized a lot because of the social repercussions it caused due to its controversial nature. The randomness of variation and the lack of purpose in human life due to the absence of God could only lead to chaos and disorder for eternity. If there was no fear of Supernatural agency, decency of man would fade and he would not control his animalistic propensities. The struggle of life meant that domination would lead to survival of stronger species and extinction of weaker ones.

Hitler believed in struggle as Darwinian principle of human life. He used evolution to justify his hatred for the Jews. Mao Tse-tung regarded Darwin as the root of Chinese scientific socialism. He was a communist. Communists believed in evolution through revolution. Mao Tse-Tung slayed more than 30 million people in the cultural revolution of 1960s. Darwinian model has been deconstructed by various critics because his theory implicitly encourages

racism, patriarchy, and lack of morality because of its extremely objective approach towards life and extinction of species on earth.

His observations also fail to explain the emergence of language which is a major impediment in its acceptability. His theory doesn't elucidate the cosmological perspective because it deals mainly with organic beings and not the science of cosmology which deals mainly with physics and mathematics and not biology.

The direct consequence of evolution was secular humanism which bequeathed the power back to the humans. No God judges mankind and thus, mankind is free and liberated.

Evolutionary theory was a thunderous roar to the creationist movement and it dispelled the fear of the masses and it gave them courage to rebel against the tyranny, injustices and persecution done by the Church. Due to the efforts of John Dewey, Christian explanation of creation has been banished and Darwinian model has been accepted universally barring a few nations.

Darwin's *The Origin of Species* is one of those works that has affected the modern man the most till now. It has caused a drastic change in the mindset of the population and lead to the need for new scientific ethics as the old ethics of Bible have been constantly scrutinized and questioned in the light of the technological revolution and corruption committed by the Church.

Until 1859, all evolutionary theories indicated some development of the chain of being towards perfection. In the "Great Chain of Being" human beings appeared in the superior position. Furthermore, man, consisting of body, mind and soul, as described in Genesis, was totally unrelated to other species. Darwin questioned this premise of Bible. He showed the flaw in the creationist model by showing that man was also on the evolutionary scale like other animals.

Nature and unique circumstances lead to the development of humans and not the traditional view where God placed humankind in the center of the universe because he loves them the most. The basic argument used by the creationists is the universe is fine tuned for life but the basic rebuttal of evolutionists is that except earth, rest of the universe is unfit for life which is a fact. We are still oblivious of any alien life or a parallel world where aliens reside.

Origin of Species spawned pessimism and cynicism as humans were no longer favorite of God and God was no longer the favorite of humans. The DNA similarity with apes revealed that we indeed have a common ancestor but God of the Gaps theory will not be reasonable to explain the gaps in our understanding of the natural world and the natural processes. 95% of human DNA is similar to that of chimpanzees. That is a miracle attributed to Nature by secular scientists and humanists who feel that God is not necessary and superfluous in explaining the universe.

Scientific history has revealed that any theory can be challenged by anyone while history of theology tells us that curiosity of people has mostly been suppressed because theology couldn't provide many reasonable answers for the complex variations in the subsets of species and how species were interlinked to one another in the branch of evolution. Although even today 2 out of 5 scientists do believe in God but majority of scientists find no need for invoking a divine power to explain the physics of the world. According to modern science, the laws of physics are sufficient to explain the workings of the physical universe and the big bang model doesn't necessarily preclude a creator albeit it doesn't state that a creator doesn't exist.

Darwinian Theory also led to the growth of atheism. Sartre's view that man is alone in a godless world gained popularity. Nietzsche's famous declaration God is dead also supported the Darwinian premise. The influence of Darwinism was so huge that it became a religion itself in the 21st century. Many scientists identified with Darwinism as their religion. Darwin became a sort of messiah for scientific community and the students of science.

The Origin of Species challenged the concept of absolute morality and showed how morals arise from relative truths. Morals are based on man-made norms and culture is the fabrication of man and myths don't explain the entropy of the world but facts and natural processes do.

Darwin's theory of evolution appealed not only to eminent scientists, such as the biologist Thomas Henry Huxley, the botanist Joseph Dalton Hooker, the anthropologist and eugenicist Francis Galton, but also to novelists and poets. As a result, many Victorian writers dramatically modified their opinions about man's origins and the physical aspect of man's existence.

Darwin's works provoked a continuing moral and existential debate which also found expression in English literature, although it must be admitted that the two poems associated with evolutionary theory, Alfred Tennyson's In Memoriam and Matthew Arnold's "Dover Beach", were written before 1859 — Tennyson's two decades earlier! A number of Victorian novelists absorbed some principles of Darwinian Theory and rendered varied, often contradictory interpretations. They introduced to their fictions lay scientists who contested traditional religious beliefs about the natural world. In her last, unfinished novel, *Daughters and Wives* (1866) Elizabeth Gaskell modeled one of her characters, Roger Hamley, on Charles Darwin, incidentally, a cousin of Gaskell on her mother's side. Gaskell's naturalist hero represents a new moral authority based on scientific research which is relevant to the modern world.

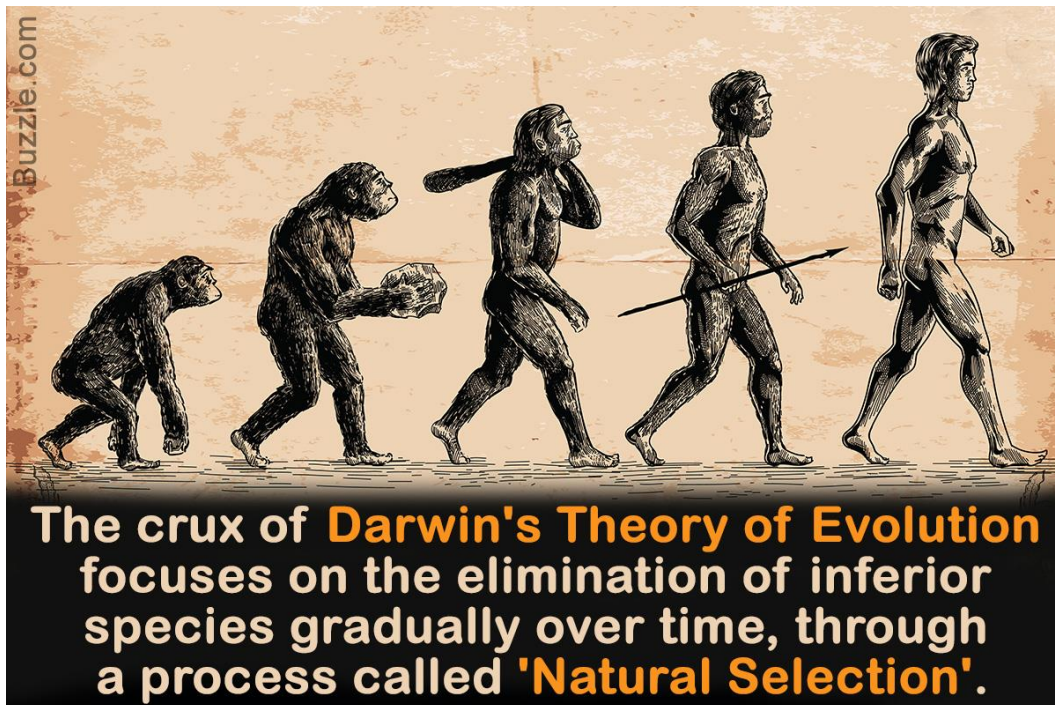
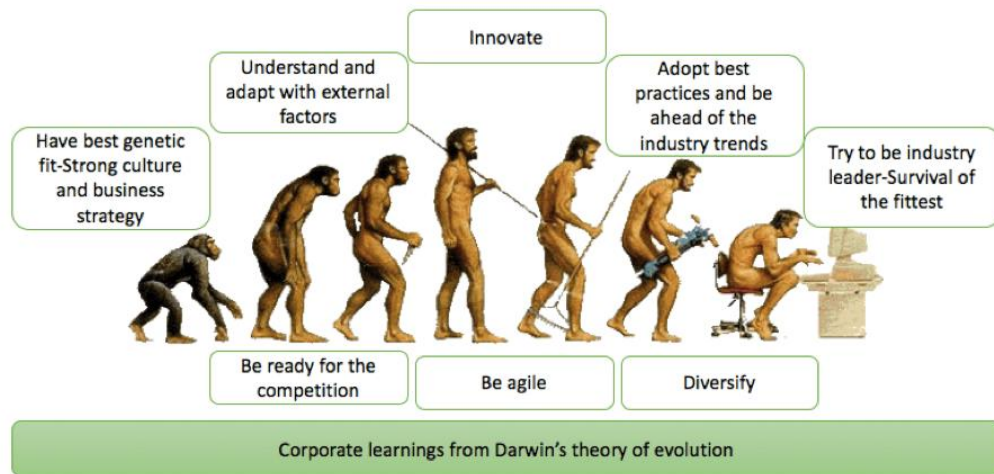
George Eliot and Thomas Hardy, who had a particular interest in science, were close readers of Darwin's works. Eliot's *Middlemarch* is regarded by some as an exemplification of the ideas of social Darwinism. For many late Victorians, including Thomas Hardy, the traditional teleological interpretation of the world lost its sense. They realized that religion and science, which were mutually supportive in the eighteenth century, in the nineteenth century

fell into open conflict. Inspired by Darwin's biologism, Thomas Hardy showed that man is the only animal for whom existence is a problem that he has to solve by his own choice and from which he cannot escape. Hardy adapted Darwin's ideas to his later fiction showing characters to be at the mercy of their environment, heredity and adaptability rather than more in control of fate. His two novels, *Tess of the d'Urbervilles* and *Jude the Obscure*, depict a ruthless Darwinian world in which protagonists fail to survive because they cannot adapt to the changing social environment.

Thus, *Origin of Species* is the most significant work of Victorian literature which deals with anthropocentric past, present and future. *Origin* a scientific thriller and cliffhanger penned down by Dan Brown shows how the larger fish of Darwinian evolution consumes the smaller fish i.e. God. Through computer simulations, Miller-Urey experiment is again demonstrated and the process of abiogenesis is shown to have proven that life indeed arose because of abiogenesis.

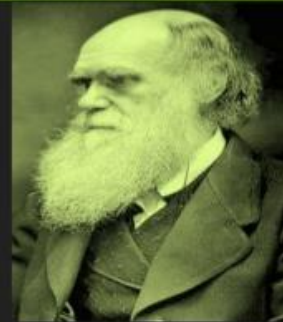
The theory of evolution through natural selection molded the ideologies of countless individuals and reformed science, literature, political science, economics and psychology. Freudian ideas coinciding with Darwinian sexual selection illustrated the growth of physical science through understanding and linking reproductive fitness with libidinal instincts leading to perpetuation of future offspring.

Darwinian evolutionary model is not just the model of gradual change from the past but it also shows that evolution is still going on and it will continue because the research in Mendellian genetics proved that natural selection is at work and that nature is a higher power than man and it does select the ones fit to survive.



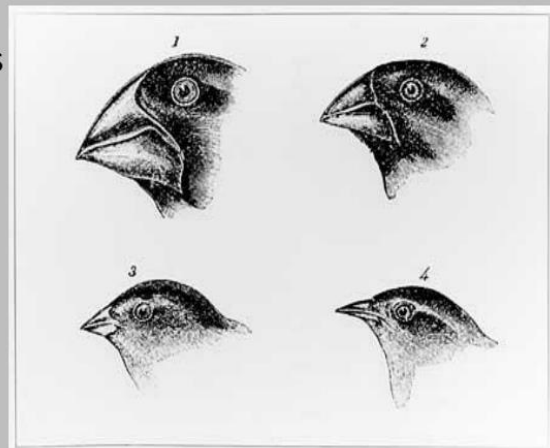
About Charles Darwin

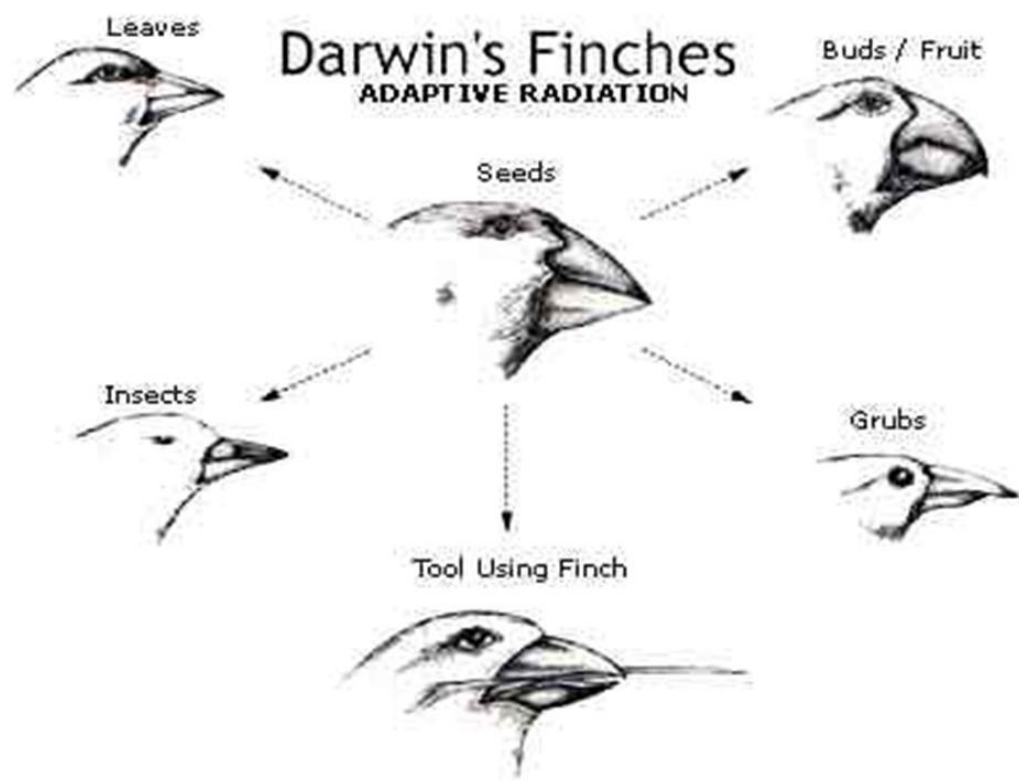
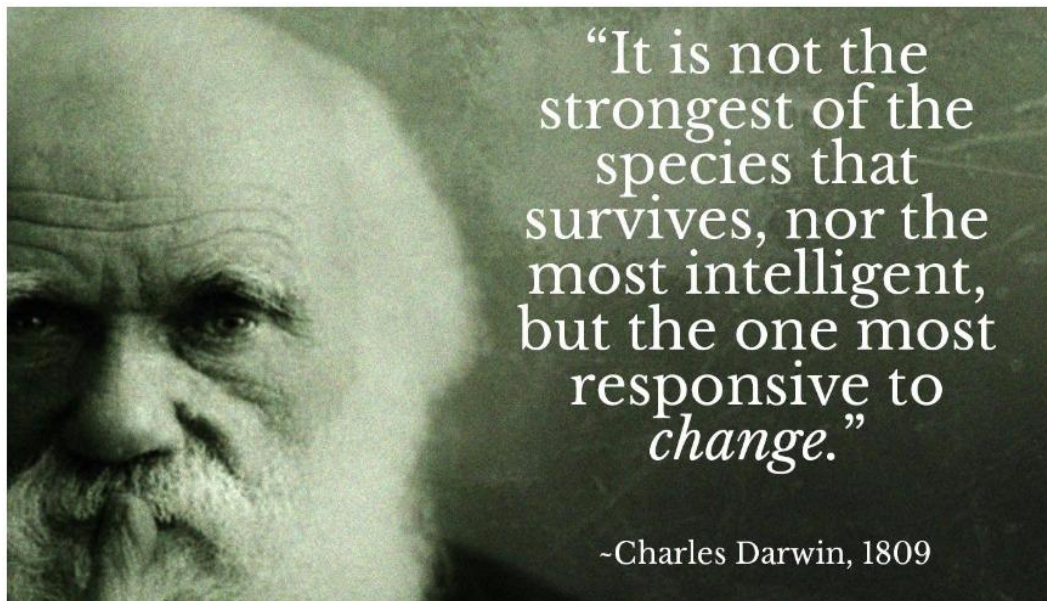
- Full name : Charles Robert Darwin
- Birth place: England
- Birth date: 12th February, 1809
- He was the great English naturalist.
- His work mainly focused in understanding the life on the Earth.



Ch 15 “Darwin’s Theory of Evolution”

- Evolution, or change over time, is the process by which modern organisms have descended from ancient organisms
- The theory can explain Earth’s biodiversity
- A scientific theory is an explanation of natural events that is supported by evidence





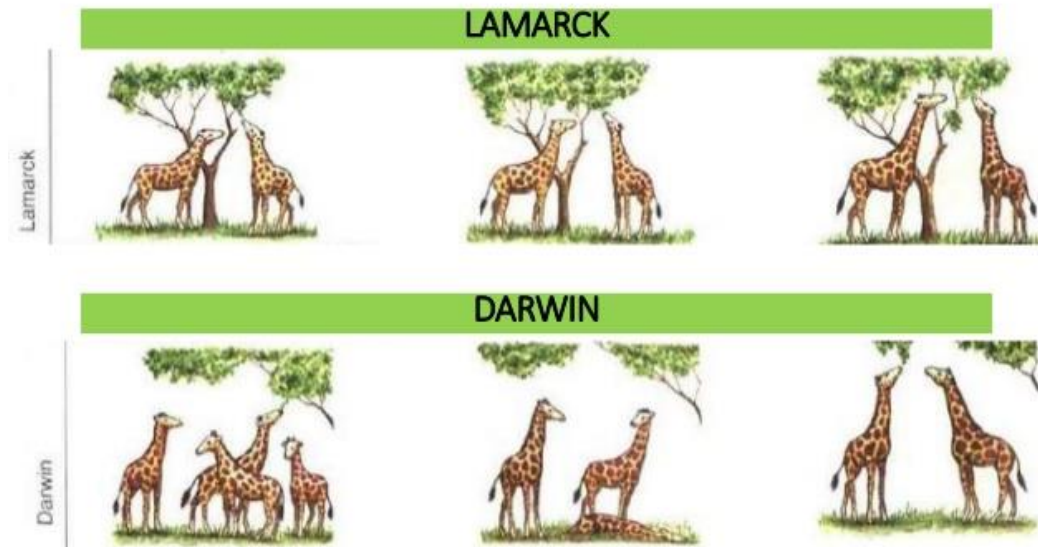
Charles Darwin

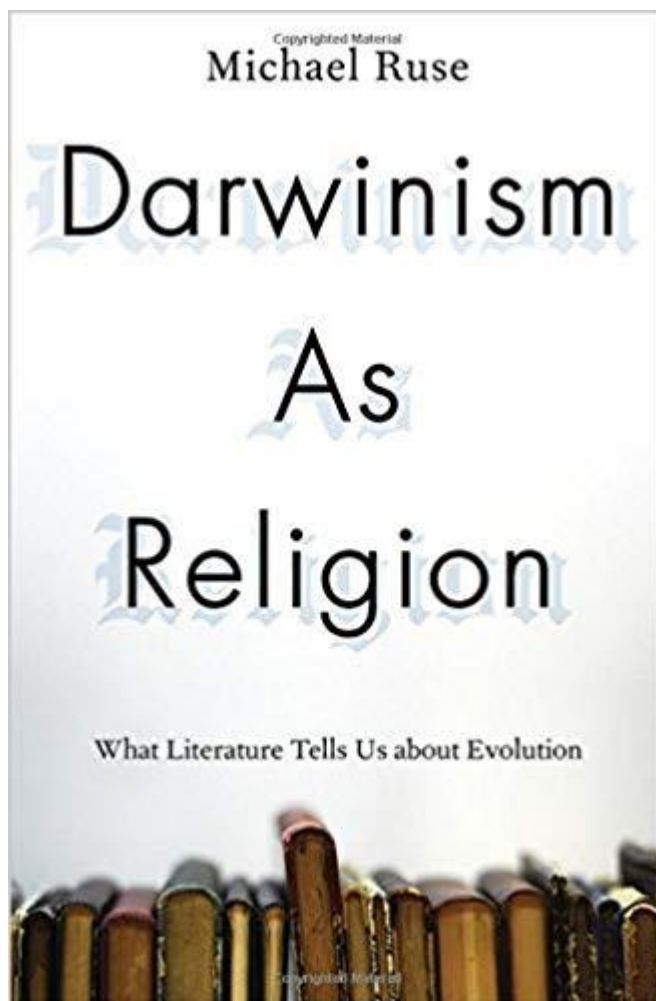
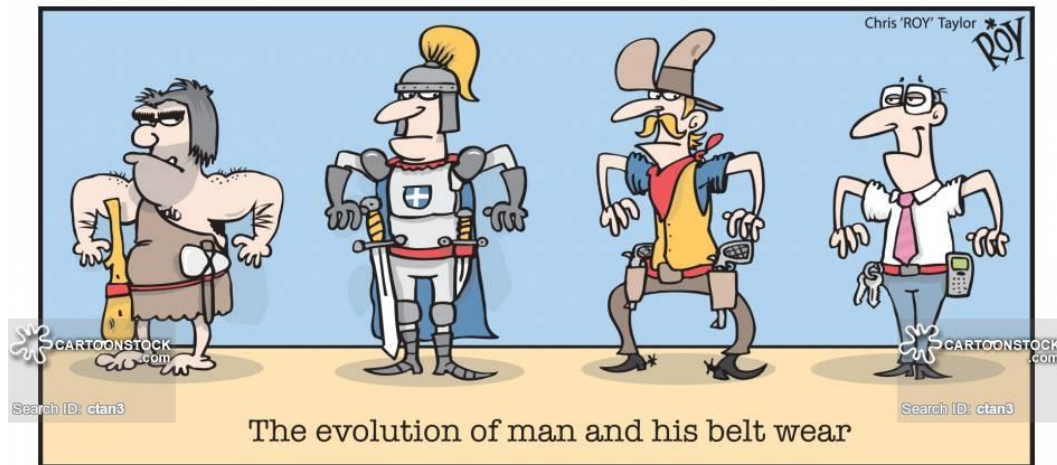
- In 1831 an Englishman named Charles Darwin took a trip on the HMS Beagle.
- He was to map the coast of South America.
- He stopped on the Galapagos Islands where he began a study that would turn scientific study in a new direction.
- Darwin discovered the various Galapagos Islands had different species of animals.
- He noticed 13 species of finches. Each finch had a different beak, specialized to find food on its island.

Charles Darwin 1872:

*"To suppose that the eye...
could have been formed
by natural selection, seems,
I freely confess,
absurd in the highest
possible degree."*







Naturalism

- Became the dominant literary movement in American fiction by the turn of the 20th century.
- Early naturalistic writers included Stephen Crane (“The Red Badge of Courage”); Jack London (“The Call of the Wild”); Theodore Dreiser (“An American Tragedy”).
- Many of their stories manifested Darwin’s theory of “survival of the fittest.”
- Naturalism is a form of extreme realism: “Human beings are animals in a natural world, responding to environmental forces and internal stresses and drives, over none of which they have control and none of which they fully understand.”¹
- In other words humans are animal-like, following their instincts to survive.

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